Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:	)	
	)	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 Ghz For Mobile and Fixed Service to Support The Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	)	ET Docket No. 00-258
	)	
Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000; Review of Spectrum and Regulatory Requirements for IMT-2000	)	RM-9920
	)	
Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/ 2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	)	RM-9911

To: The Commission

SUMMARY

We have examined the Notice of Proposed Rule Making and Order ("NPRM") and it is clear that the FCC is primarily considering paired frequency band allocations, as seen in Paragraphs 66-69, for new advanced wireless services including third generation ("3G") as well as future generations of wireless systems. LinkAir Communications (USA), Inc. strongly urges the FCC to allocate unpaired licensed frequency bands for the reasons listed below.

If unpaired frequency bands are not allocated, the FCC is exhibiting a preference for technologies that require paired frequency bands over technologies. This is not consistent with the FCC's policy of taking a flexible approach to standards and not mandating a particular type of technology, as per Paragraph 21 of the NPRM.

Furthermore, the allocation of unpaired frequency bands is in the best long term economic interests of the United States from a domestic and international perspective. Partnerships with domestic wireless service providers are critical partnerships for wireless equipment manufacturers in testing and developing wireless communication systems. If unpaired frequency bands are not allocated in the United States, no wireless service provider will be able to deploy standards based global TDD systems in the United States using technologies based on unpaired frequency bands. Consequently, domestic wireless equipment manufactures will be at a competitive disadvantage in the international markets as they develop and commercialize technologies deployable in the unpaired frequency bands.

From a more philosophical perspective, the FCC has an opportunity to encourage innovation, invention and economic growth by allocating unpaired licensed frequency bands to encourage the industry to seek solutions to challenging engineering issues.

Finally, it is in the best interest of the American consumers for the FCC to allocate unpaired frequency bands because there are unique wireless services that exhibit asymmetric traffic patterns, such as Internet applications, that can be best provided by using technologies based on unpaired frequency bands. We believe TDD systems, which require unpaired frequency bands, offer an excellent potential for providing spectrally efficient 3G wireless services.

CONSIDERATIONS

LinkAir Communications, Inc. submits these comments in response to the Notice of Proposed Rule Making and Order in the caption proceeding, FCC 00-0455 (released January 5, 2001) ("NPRM"). The NPRM explores the possibility of introducing new advanced mobile and fixed services (including Third Generation mobile services, or "3G") in various paired frequency bands.

LinkAir Communications, Inc. is a wireless telecommunications startup company developing new and innovative wireless technologies in Santa Clara, California. Our technology, called Large Area Synchronized Code Division Multiple Access (LAS-CDMA) has the potential to improve the spectral efficiency of paired frequency bands and unpaired frequency band wireless telecommunications systems. However, our technology can specifically provide the key to unlock the full potential of TDD-based wireless telecommunications systems by allowing more simple system designs for networks and terminals, which ultimately translates into higher performing but lower cost services and products for consumers.

PART 1

LinkAir Communications (USA), Inc. clearly understands that the FCC's position is to avoid promoting one technology over another and LinkAir fully supports this position. However, LinkAir Communications believes that the FCC is inadvertently promoting one technology over another by primarily proposing paired frequency bands and not including unpaired frequency bands in its proposal.

To address some of the issues raised in Paragraph 29 of the NPRM, TDD based systems do not require paired spectrum and have unique capabilities that can more efficiently accommodate asymmetric traffic, such as when using Internet applications, because the sizes of the uplink and downlink traffic channels are not fixed. TDD based systems have the ability to dynamically vary the size of the uplink and downlink traffic channels over time at any given moment in response to the traffic load and direction. In addition, TDD based network systems and terminals are potentially less costly than systems requiring paired frequency bands because the system designs for the network and terminals are less complex.

As a consequence, if the FCC does not allocate unpaired frequency bands then operators will be forced to purchase paired frequency bands with either more spectrum than they need or

spectrum that is allocated in a way that prevents them from using the optimal technology for their service. A misallocation of frequency bands will ultimately increase the cost to the consumer and reduce the value and quality of 3G wireless service to the American consumer.

PART 2

Europe, Asia, South America and Australia have already or are likely to allocate unpaired frequency bands for 3G wireless services. Foreign wireless telecommunications equipment manufacturers are already entrenched in their respective local markets, supplying equipment to the local wireless service operators. Foreign manufacturers are able to shorten their product development schedules and have their products reach their full commercial potential through their close partnerships with their local wireless service operators.

US wireless telecommunications equipment manufacturers are developing products to meet the needs of the international markets with unpaired frequency bands because of the large market potential. However, the US manufacturers will not be able to efficiently reach their full market potential if there is not a local market to support the final stage of commercial trials that is so critical for developing world-class products. Thus the FCC's policies with respect to paired vs. unpaired frequency band allocation have a potential to positively or negatively impact the competitiveness of US wireless equipment manufacturers overseas.

PART 3

The wireless industry is currently considering how to evolve 3G networks to 4th generation wireless systems. There is a strong possibility that 4th generation systems will be based on a TDD wireless technology, which does not require paired spectrum. Consequently, it is in the national interests of the United States to ensure that innovations continue to take place with respect to the development of TDD based wireless systems so that the United States

continues to be in a leading role in the development of cutting edge wireless standards and technologies worldwide.

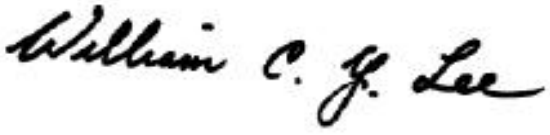
In addition, one of the IMT-2000 guidelines is to support the global roaming service, as per Paragraph 24 of the NPRM, with TDD being one of the 3 IMT-2000 modes. If the FCC does not allocate unpaired spectrum then wireless service providers using systems based on unpaired spectrum (TDD, etc.) will not able to offer the global roaming service within the United States as per the IMT-2000.

CONCLUSION

The FCC should allocate the unpaired licensed frequency bands to maintain its technology agnostic position, to promote the competitiveness of the domestic wireless equipment manufacturers overseas as well as domestically, and so that the American consumer can enjoy the benefits of wireless services, like Internet applications, that are best delivered over unpaired frequency band wireless telecommunications system.

Thank you for your time and consideration.

Respectfully yours,



Dr. William C.Y. Lee
Chairman
LinkAir Communications, Inc.

Date: February 22, 2001

Member – California Council on Science and Technology
Former Member – Federal Communications Commission Technical Advisory Council 1999-2001
Author – Mobile Communications Engineering
Author – Mobile Communications Design Fundamentals
Author – Mobile Cellular Telecommunications
Author – Essentials of Wireless Communications